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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,777	12/15/2006	Shuichi Umezawa	290554US2PCT	9628
22850 7590 06/10/2009 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER MONDT, JOHANNES P	
			ART UNIT 3663	PAPER NUMBER
			NOTIFICATION DATE 06/10/2009	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/577,777	<b>Applicant(s)</b> UMEZAWA ET AL.	
	<b>Examiner</b> JOHANNES MONDT	<b>Art Unit</b> 3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1 Form 1449</u> .   | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. The filing of the application on 12/15/2006 prompts this Office action.

#### ***Information Disclosure Statement***

2. The examiner has considered the items listed in the Information Disclosure Statement ('IDS') filed on 4/28/06. A signed copy of Form PTO-1449 is herewith enclosed as acknowledgment of consideration.

#### ***Claim Objections***

3. ***Claims 1-11*** are objected to because of the following informalities: the wording "which causes on deterioration" (line 58 of claim 1) should be replaced by "which causes a deterioration". Idem three lines from below in claim 10 and five lines from below in claim 11. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. ***Claims 1-9*** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The "feed-and-condensate-water-flow-rate-setting means for setting a flow rate" 13 triggers 35 U.S.C. 112, 6<sup>th</sup> paragraph, and in view of the specification computer with input device 11 and output device 12 is applicant's means-plus-function. See "Best Mode for Carrying out the Invention", pages 11-12.

Art Unit: 3663

However, again with reference to pages 11-12 of the specification, the same computer with input device (11) and output device (12) is:

- applicant's "heat-exchange-on-heater-calculating-means for calculating heat exchange quantities" (14),
- applicant's "HP-turbine-power-calculating means for acquiring a calculated power value" (15),
- applicant's HP-turbine-power-correcting-means (16) for making the HP-turbine-power-calculating means correct a dryness on an outlet of the HP turbine,
- applicant's "HP-turbine-internal-efficiency-calculating means (17) for calculating an internal efficiency of the high-pressure turbine",
- applicant's "steam-condition-on-LP-turbine-inlet-calculating means (18) for setting a condition of a steam on an inlet of a low-pressure turbine",
- applicant's "LP-turbine-power-calculating-means for acquiring a calculated power value of the low-pressure turbine" (21),
- applicant's "LP-turbine-power-correcting-means (22) for making the LP-turbine-power-calculating means correct the reference expansion line of the low-pressure turbine",
- applicant's "LP-turbine-internal-efficiency-calculating-means (23) for calculating an internal efficiency of the low pressure turbine", and
- applicant's "performance-deteriorating-element-specifying-means (25) for specifying an element causing deterioration of performance of the nuclear

Art Unit: 3663

power plant”, said computer with input and output device 11/12 functioning as all of the above means-plus-function.

This means that the same device is claimed multiple times. Yet the computer with input and output device is a single device. Hence no structure, but instead software appears referred to through the various means-plus-function. Since no structure can be referred to for the means-plus-function language, the claims defining the inventive system are indefinite. MPEP 2181, section II.

6. **Claim 10** is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: except for steps S1, S2, S3, S4, S6, S7, S8, S9, S12, S16, S27 and S32, all steps (32-12=20) are missing (see Figure 8 containing the only flow chart of the inventive method). The omitted steps are disclosed as essential, since none of them are optional. Also from an a priori point of view said steps are essential, e.g., flow rate calculation of the extracted steam appears essential for calculating power loss (steps S5, S17, S18).

### ***Claim Rejections - 35 USC § 101***

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. **Claim 11** is rejected under 35 U.S.C. 101 because the claim is drawn to a program allowing a computer to function, i.e., is drawn directly to a computer program.

*“Since a computer program is merely a set of instructions capable of being executed by a computer, the computer program itself is not a process and USPTO*

Art Unit: 3663

*personnel should treat a claim for a computer program, without the computer-readable medium needed to realize the computer program's functionality, as nonstatutory functional descriptive material". MPEP 2106.02.*

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHANNES MONDT whose telephone number is (571)272-1919. The examiner can normally be reached on 8-17.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack W. Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JOHANNES MONDT/  
Primary Examiner, Art Unit 3663